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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,267	03/17/2004	Peter Poechmueller	2001 P 08978 US	4209

48154 7590 06/23/2005		
SLATER & MATSIL LLP	EXAMINER	
17950 PRESTON ROAD	WILLIAMS, HOWARD L	
SUITE 1000		
DALLAS, TX 75252	ART UNIT	PAPER NUMBER
	2819	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-27_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-27_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☒ All b) ☐ Some * c) ☐ None of:

         1. ☒ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____.

         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _070604 & 010605_.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Claim 14 is objected to because of the following informalities: The word "are" is needed between "have" and "complementary" in line two. Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11-22, 24, 25 and 27 are rejected under 35 U.S.C. 102(e) as anticipated by Borkar et al. (US 6538,584 B2). Borkar discloses data bus encoding to control the transitions and provide "secure" communication by compare the previous and current words to determine the number of transitions. If the threshold is exceeded the bits of the current word are inverted by the encoder (68; fig. 5) and sent to the drivers (72; fig. 3). An indicator bit is represented by the additional data line "X" in the "N+X" expression.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10, 22, 23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bogin (US 6,584,526 B1). Bogin discloses a bus encodin system

which examines the bits of the current word and determines whether the number of bits of a first logical state or a second logical state exceed a threshold. Bogin's threshold is a ratio of 50%. If more than half the bits are determined to be active, the inversion control (and indicator) is asserted and the data word is inverted. Indication of this change is communicated to the receiving in by line 19 in figure 1. Bogin does not disclose the threshold as two-thirds of the total number of bits; however, it is noted that the specific ratio selected is disclosed by applicant to be arbitrary (page 15 penultimate line). Accordingly, the selection between one-half as disclosed by Bogin and the two-thirds ratio disclosed by applicant is seen as a matter of design choice.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamura et al. in the IEEE article <u>A 500-MHz 4-Mb CMOS pipeline-burst cache SRAM with point-to-point noise reduction coding I/O</u> and Stan et al. in the IEEE article <u>Bus-Invert Coding for Low-Power I/O</u> disclose a bus inversion systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard L. Williams at telephone number (571) 272-1815.

6/21/05
Voice: (571) 272-1815

Howard L. Williams
Primary Examiner
Art Unit 2819